

Amendments to the claims.

Please amend the claims as follows:

1. (currently amended) A process instrument comprising:

a housing;

a level sensing probe comprising a transmission line ~~an active sensing element~~ for sensing a characteristic of a process represented by an impedance change on the transmission line;

~~a control circuit disposed in the housing and electrically connected to the active sensing element probe~~ for measuring the sensed characteristic comprising a pulse circuit connected to the probe for generating a very fast stream of pulses on the transmission line at a select operating frequency and receiving reflected pulses returned on the transmission line, the reflected pulses representing impedance changes; and

a safety barrier comprising a blocking capacitor barrier electrically connected between the control circuit and the active sensing element the probe so that the safety barrier comprises a portion of the transmission line providing impedance matching at the select operating frequency.

2. (currently amended) The process instrument of claim 1 wherein the probe active sensing element comprises a guided wave radar transmission line.

3. (currently amended) The process instrument of claim [[1]] 4 wherein the capacitors comprise 1000 pF capacitors active sensing element comprises a capacitance probe.

4. (original) The process instrument of claim 1 wherein the blocking capacitor barrier comprises a plurality of series connected capacitors.

5. (original) The process instrument of claim 1 wherein the blocking capacitor barrier comprises a plurality of series connected high voltage capacitors.

6. (currently amended) A process instrument comprising:  
a housing;  
a probe comprising a transmission line for sensing a characteristic of a process  
represented by an impedance change on the transmission line;  
a control circuit disposed in the housing and electrically connected to the probe for  
measuring the sensed characteristic comprising a pulse circuit connected to the probe for generating  
a very fast stream of pulses on the transmission line at a select operating frequency and receiving  
reflected pulses returned on the transmission line, the reflected pulses representing impedance  
changes; and

a safety barrier comprising a plurality of series connected capacitors electrically  
connected between the control circuit and the probe so that the safety barrier comprises a portion of  
the transmission line providing impedance matching at the select operating frequency.

7. (original) The process instrument of claim 6 wherein the probe comprises a  
guided wave radar transmission line.

8. (currently amended) The process instrument of claim 6 wherein the capacitors  
comprise 1000 pF capacitors probe comprises a capacitance probe.

Claims 9-32 (canceled).